

**Evaluation Of Water Quality Impacts Associated  
With FMC And Simplot Phosphate Ore Processing  
Facilities, Pocatello, Idaho**

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**Department of Environmental Quality  
Technical Services Division  
January 2004**

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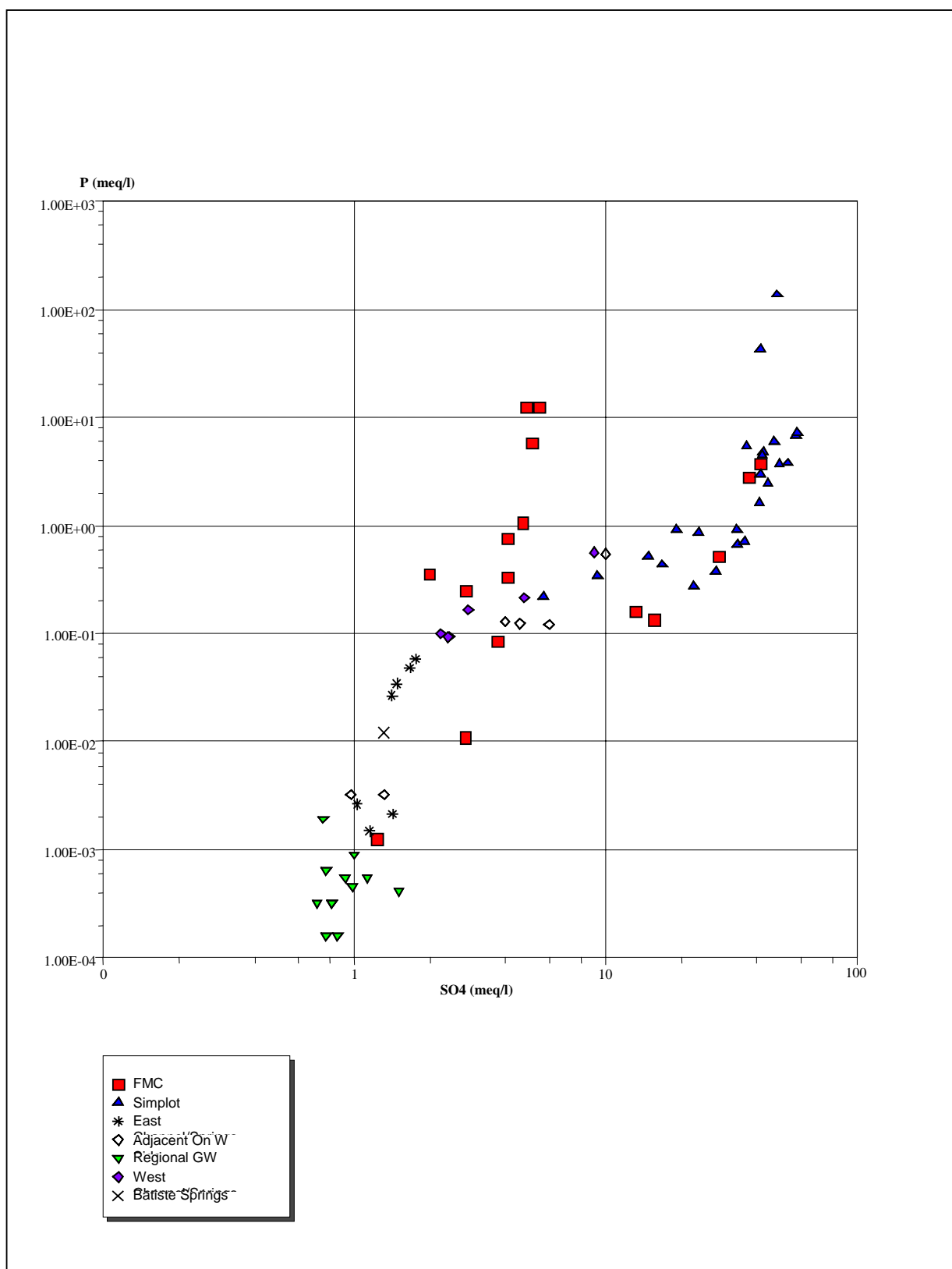
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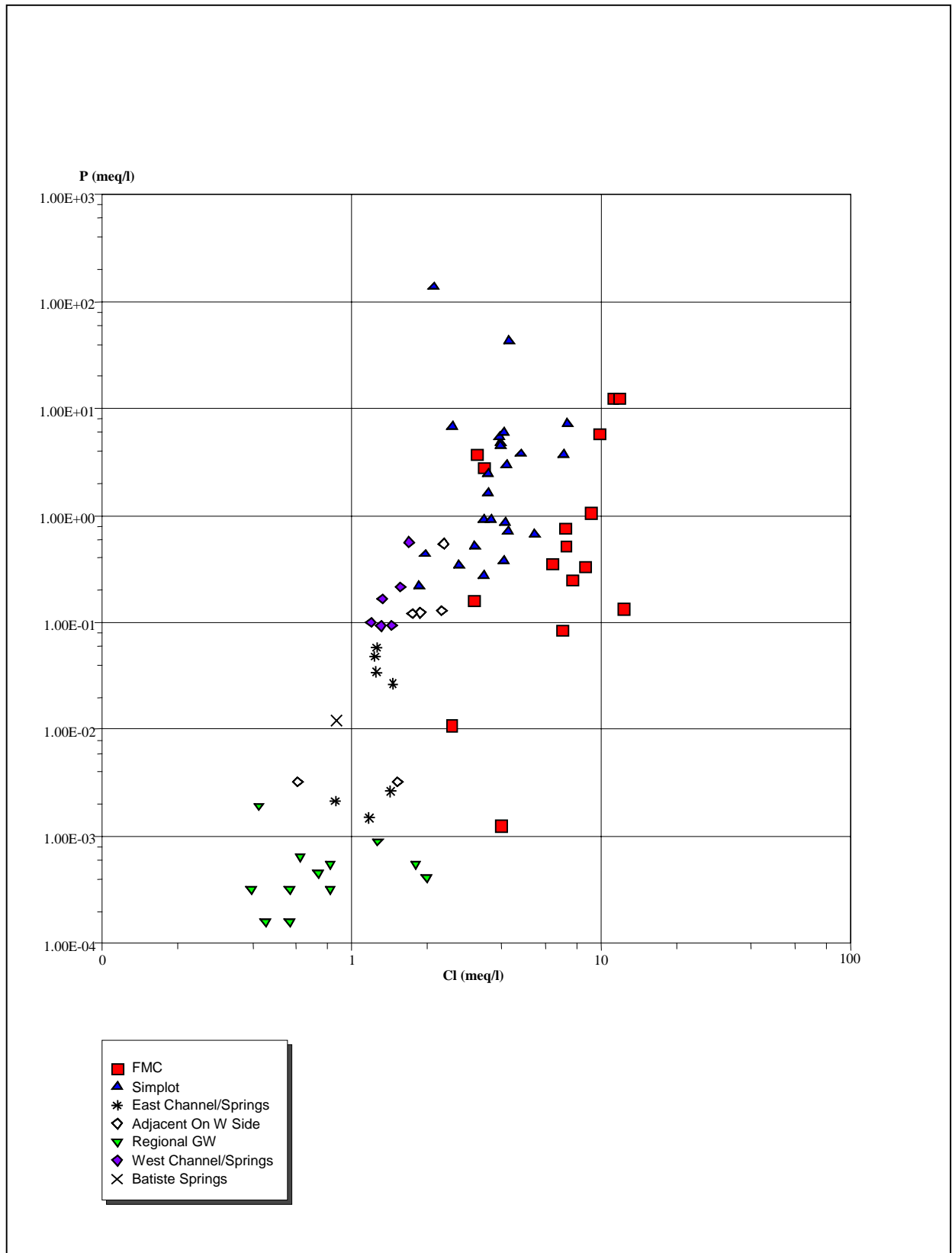
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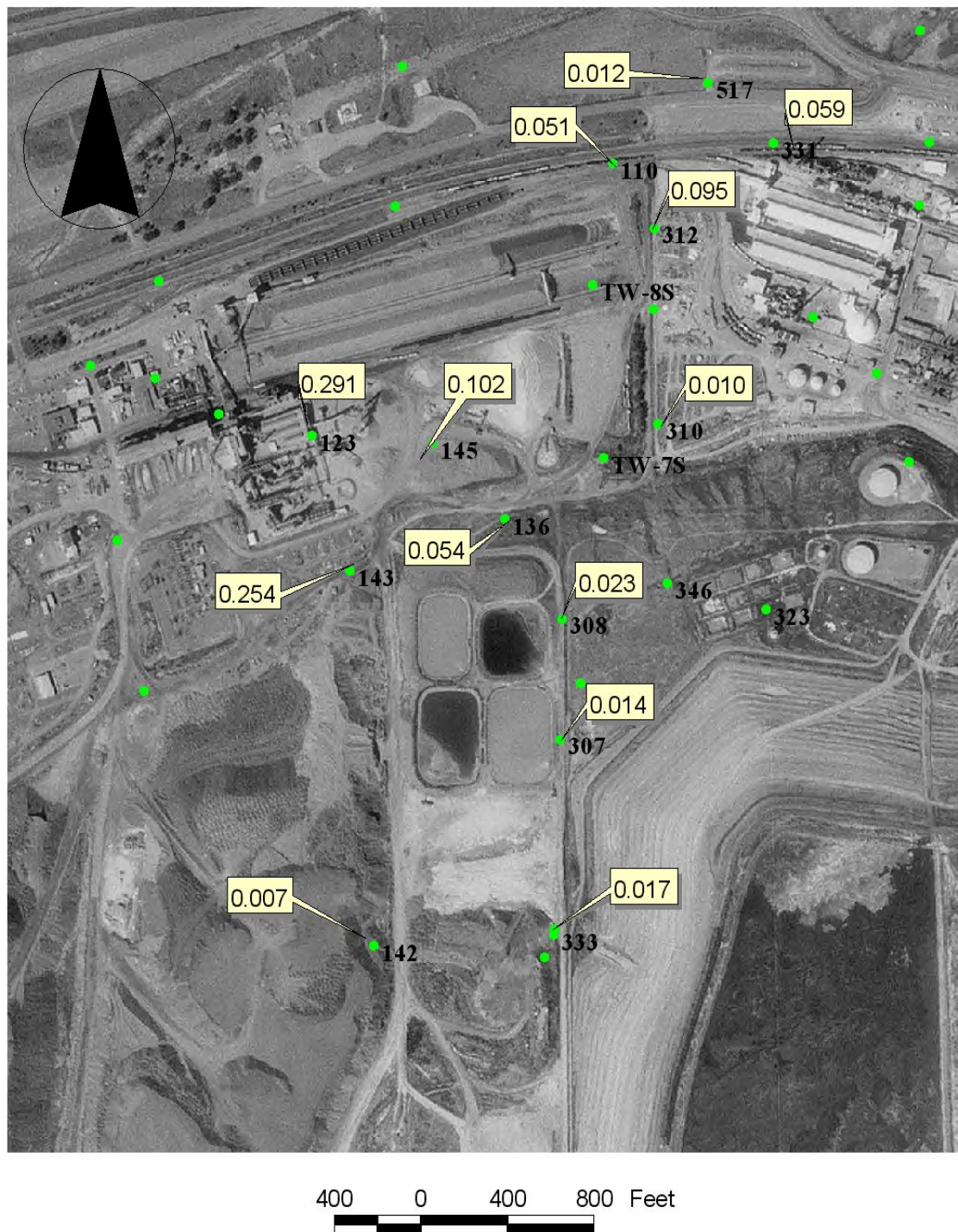
## FIGURES





**Figure 30. Orthophosphate vs. chloride concentration in water from Portneuf River, springs, and selected wells on FMC and Simplot facilities.**

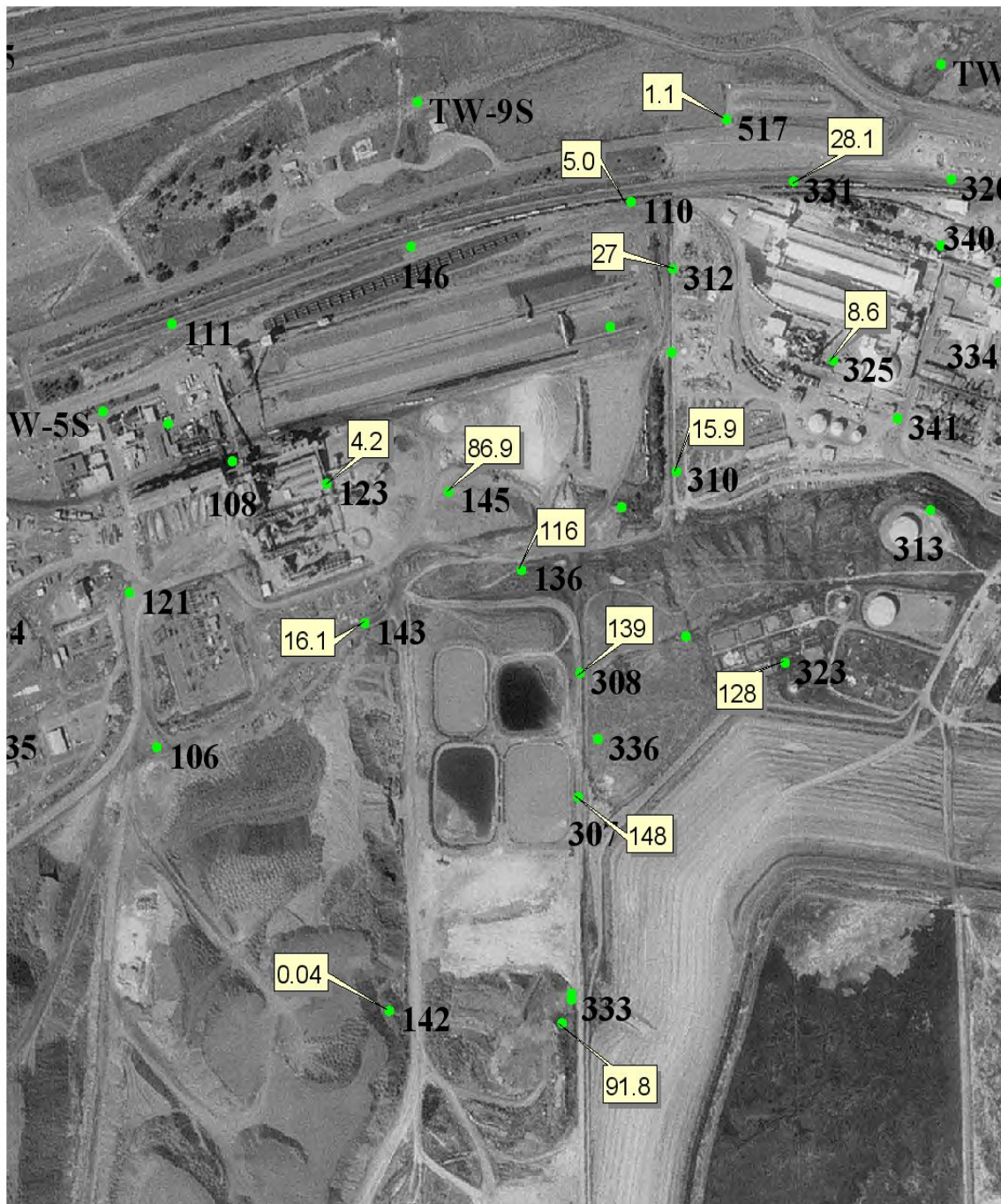




Note: Selenium Concentrations are taken from 12/1993 and are expressed as mg/l.

Figure 31. Selenium concentration in ground water in the Joint Fenceline area.





## FMC Selenium Groundwater Concentration Time Trends in Joint Fenceline Area

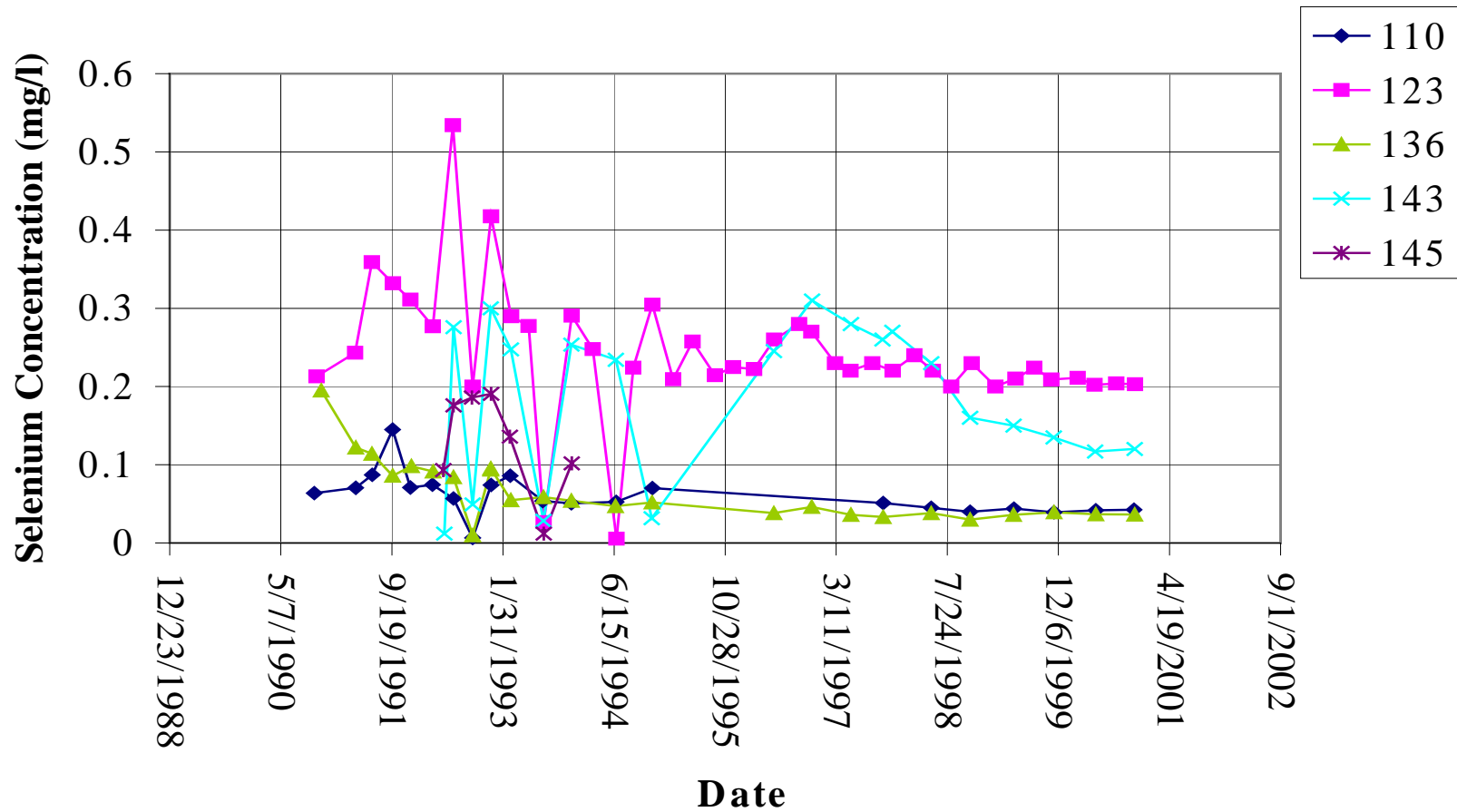
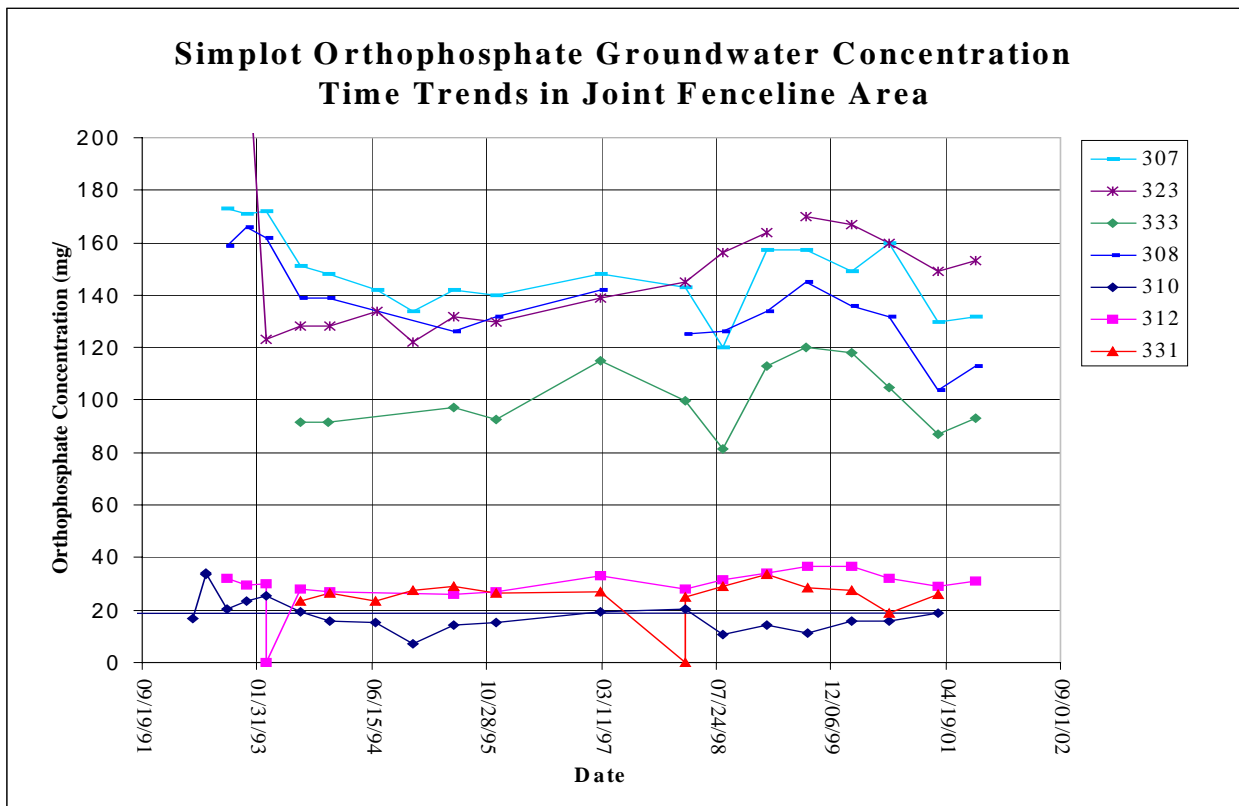
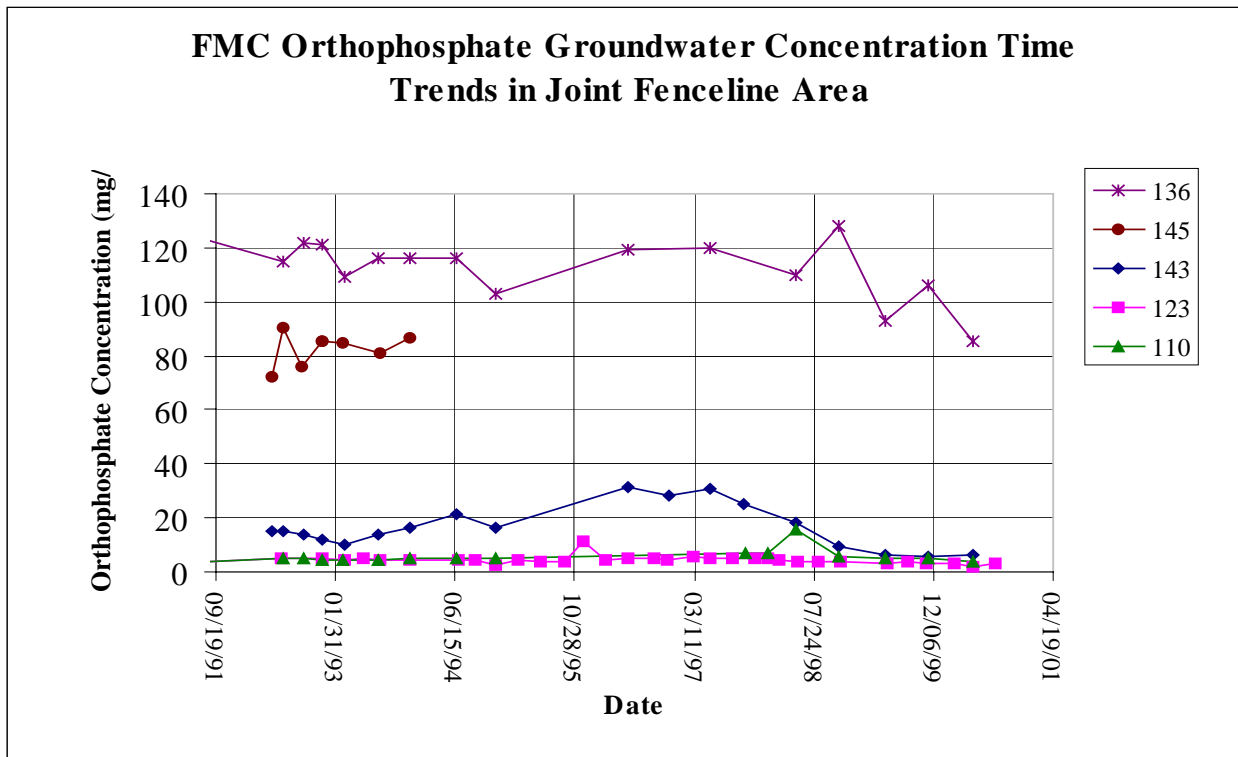
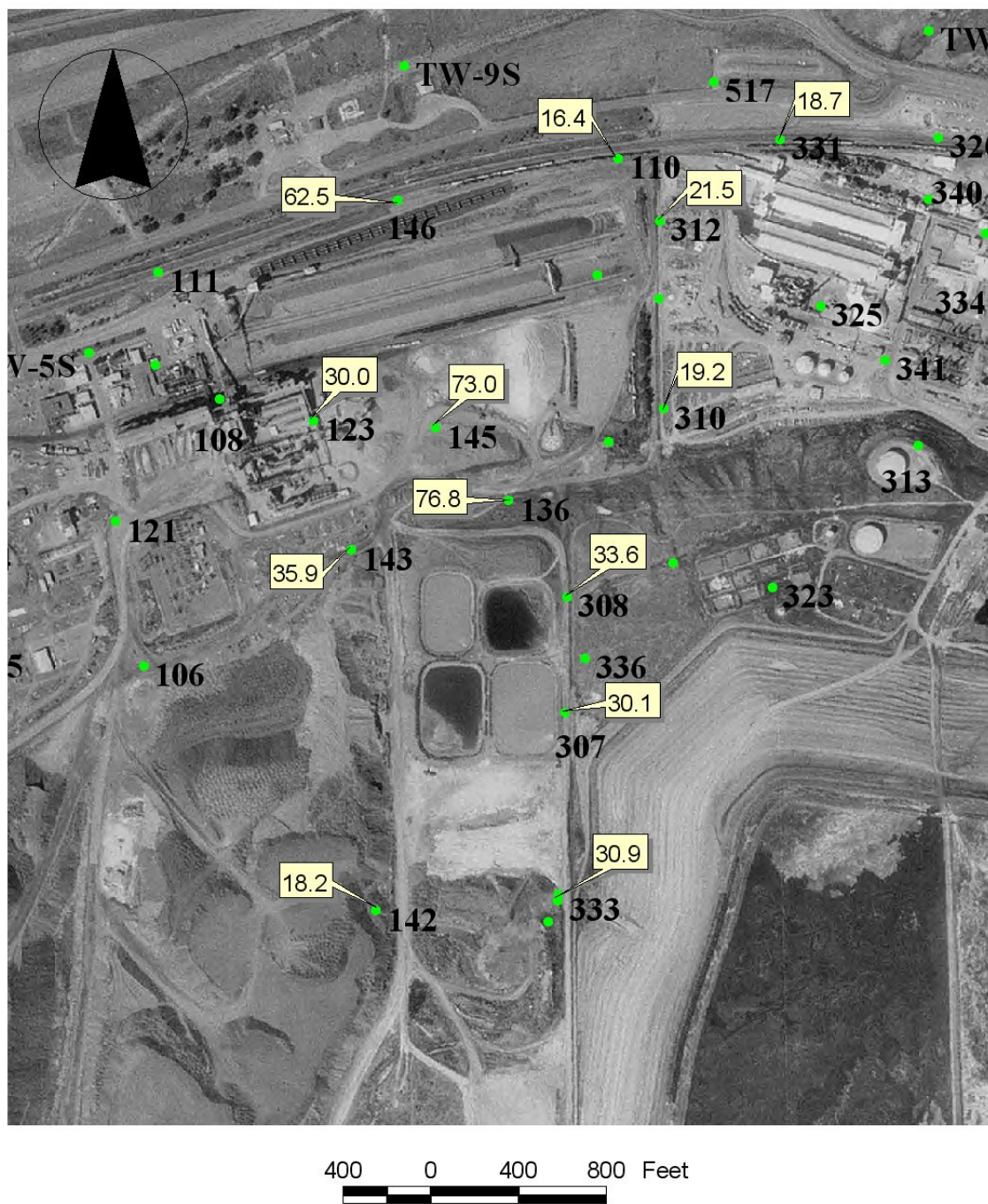


Figure 33. Selenium Concentration Time Trends in Groundwater from Selected FMC Wells in the Joint Fenceline Area.



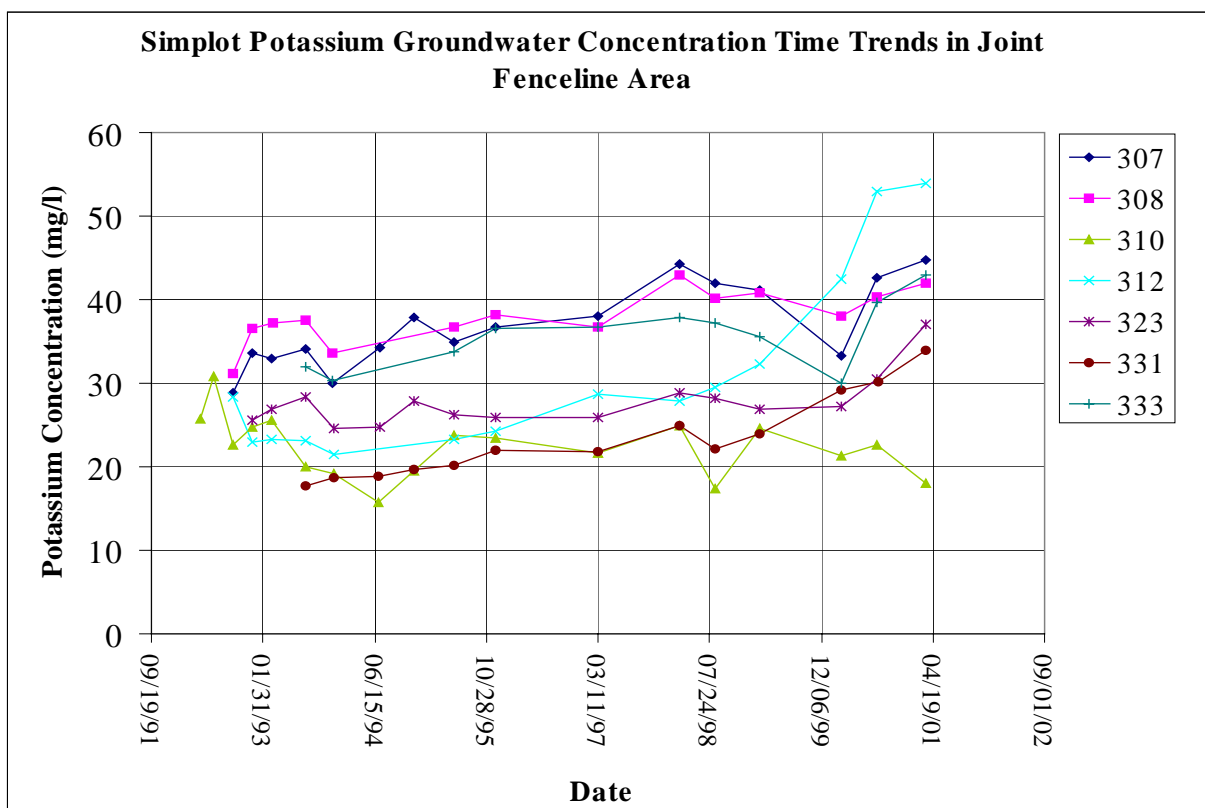
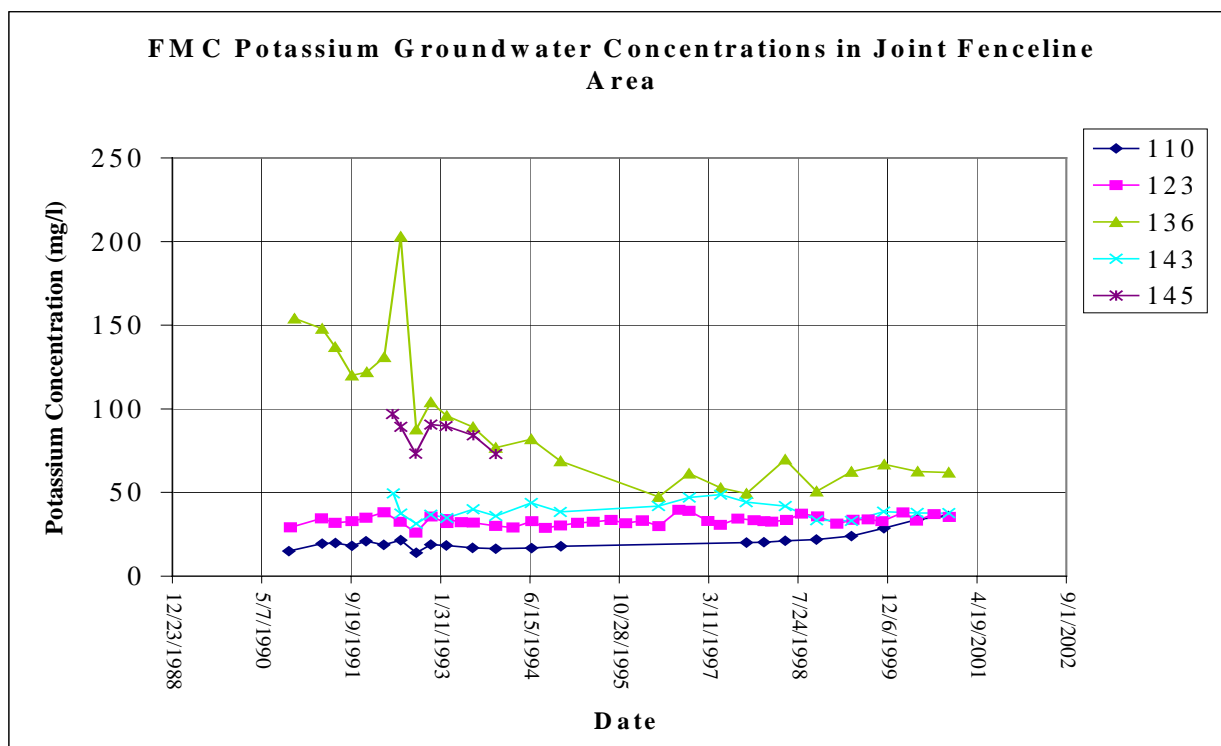
**Figure 34. Orthophosphate concentration time trends in ground water from selected FMC and Simplot wells in the Joint Fenceline area.**





Note: Potassium Concentrations are taken from 12/1993 and are expressed as mg/l.

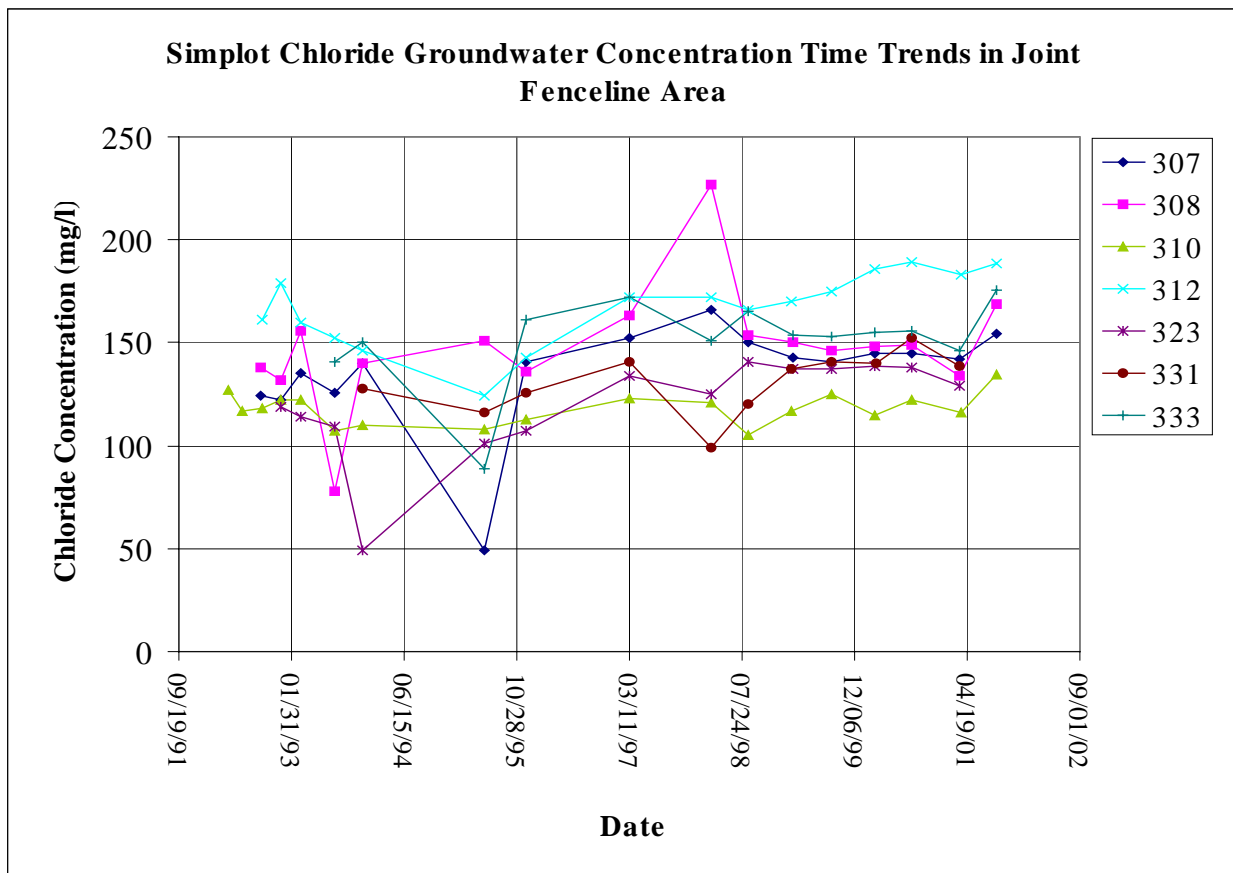
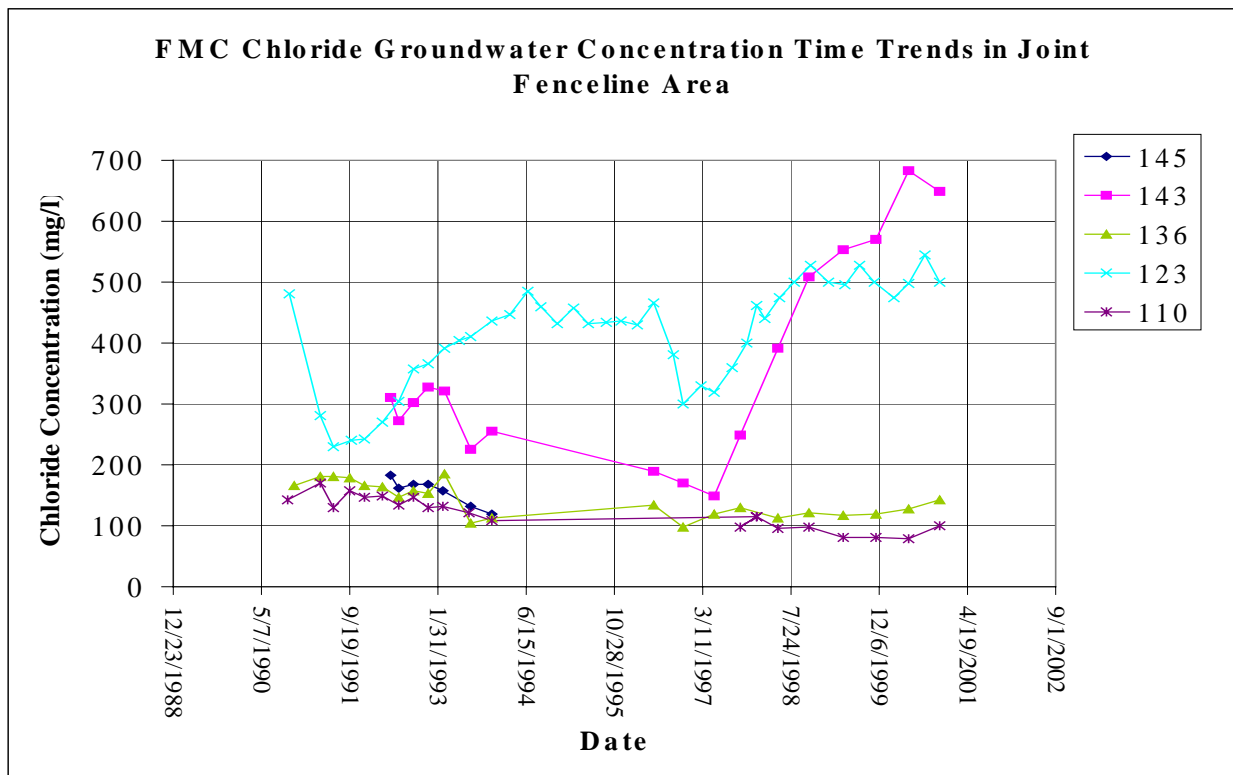
Figure 35. Potassium concentration in ground water in the Joint Fenceline area.



**Figure 36. Potassium concentration time trends in ground water from selected FMC and Simplot wells in the Joint Fenceline area.**







**Figure 38. Potassium concentration time trends in ground water from selected FMC and Simplot wells in the Joint Fenceline area.**





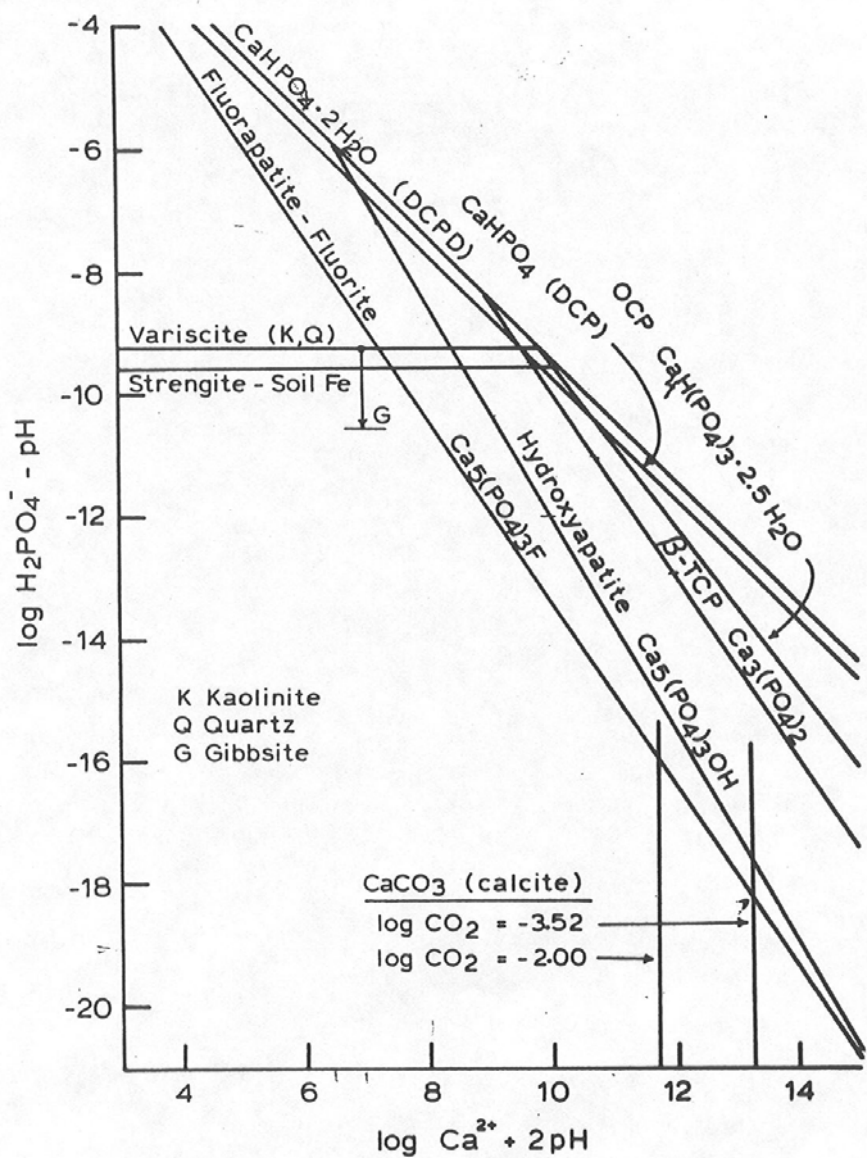
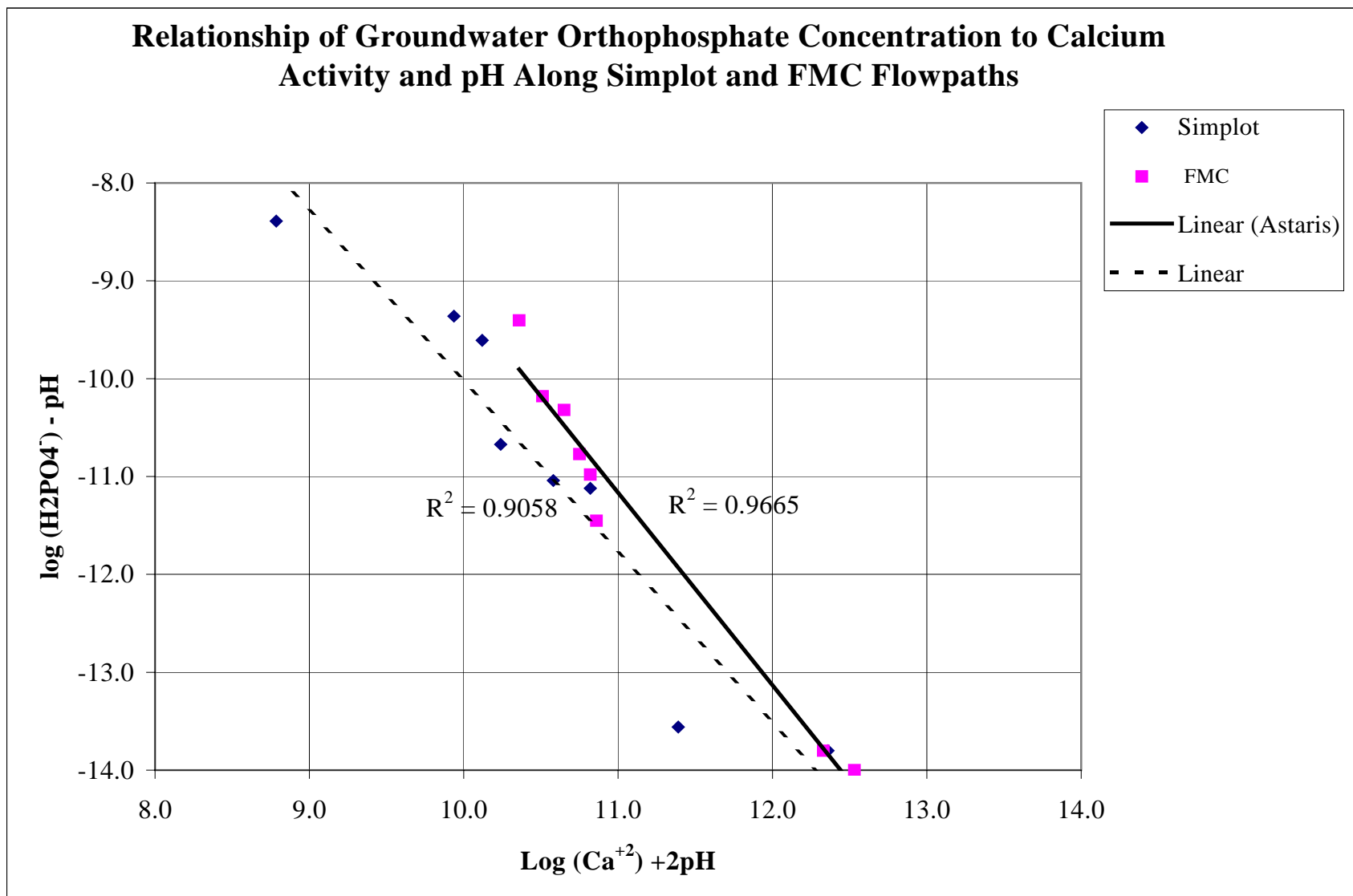
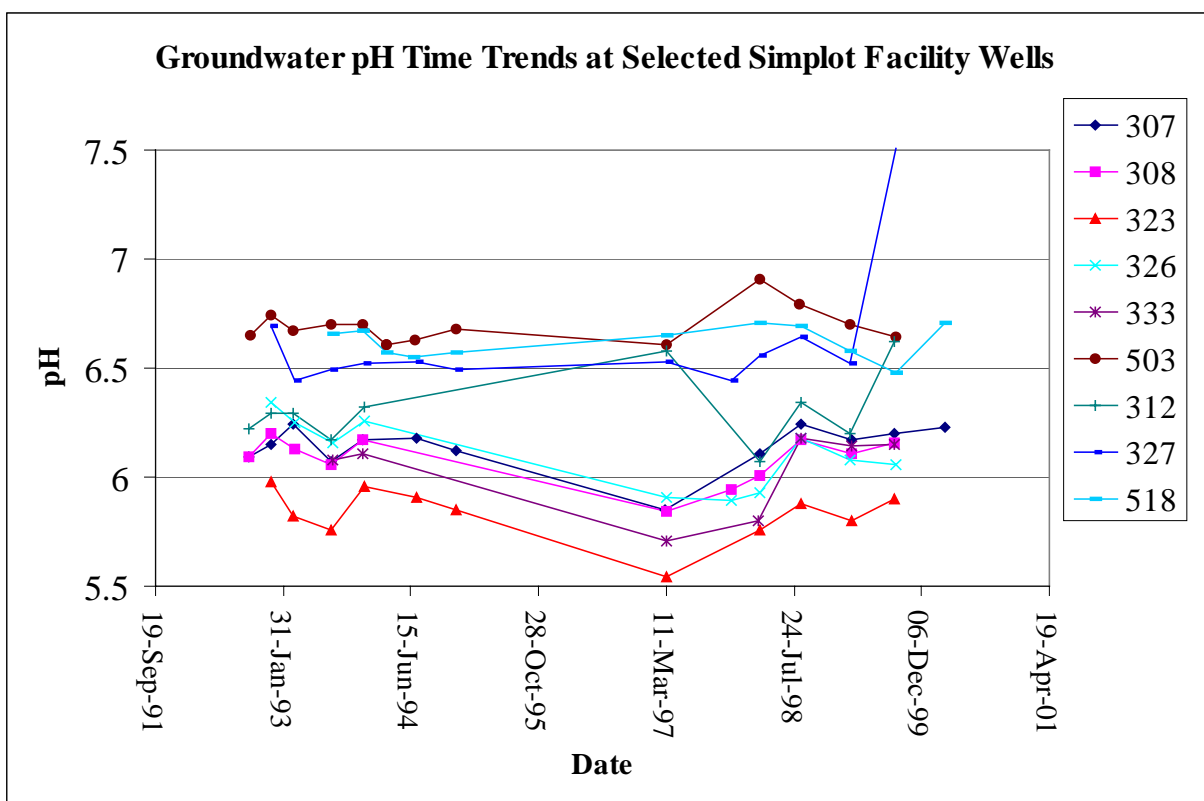
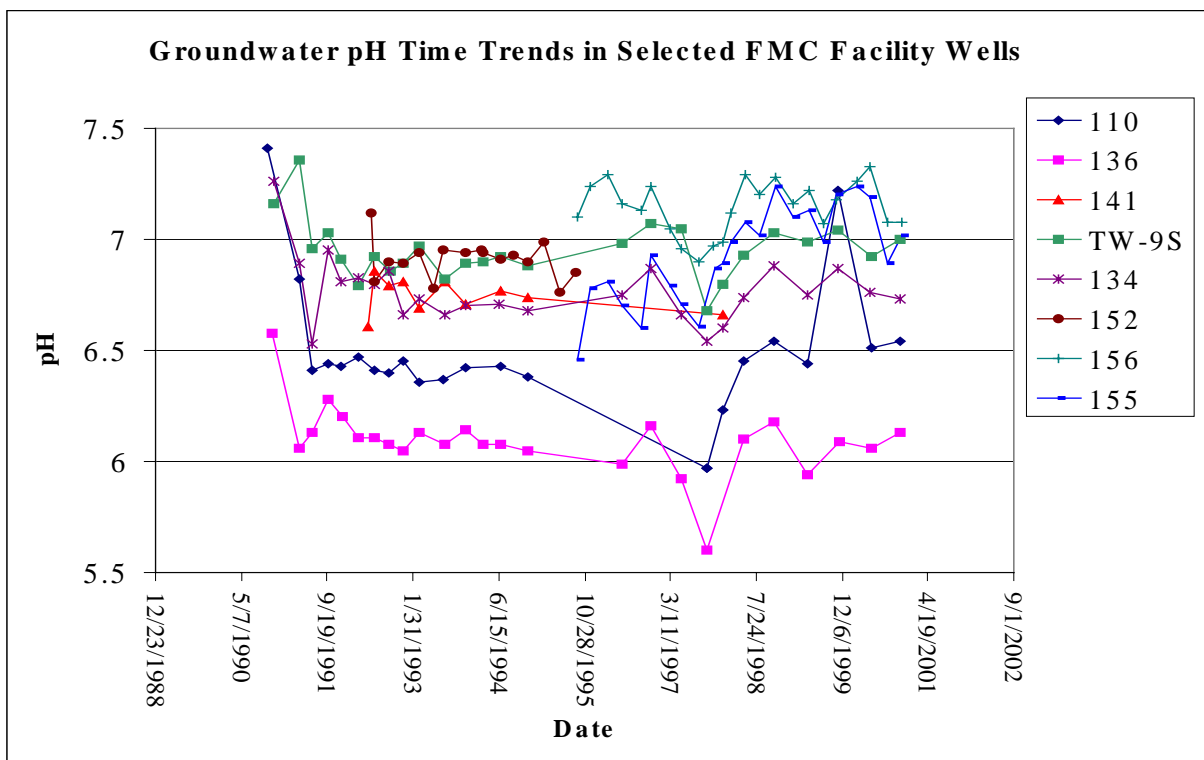


Fig. 12.9 The solubility of calcium, iron, and aluminum phosphates showing limits imposed by calcite and  $\text{CO}_2(\text{g})$ .

Figure 40. Solubility diagram of calcium phosphate minerals. Reproduction of Figure 12.9 from Lindsay (1979).



**Figure 41. Relationship of groundwater orthophosphate concentration to calcium activity and pH along simplot and FMC flowpaths.**



**Figure 42. Groundwater pH time trends in selected FMC and Simplot facility wells.**